

REMARKS

Claims 1-30 are pending in the present application. Applicants respectfully request reconsideration of the present claims in view of the following remarks.

I. Double Patenting:

Claim 1 is directed to, *inter alia*, a heat transfer material comprising a substrate layer; a release coating layer; a peelable film layer; and an opaque crosslinked polymer layer.

Claim 13 is directed to, *inter alia*, a heat transfer material comprising a substrate layer; a release coating layer; a peelable film layer; a crosslinked polymer layer having an opacifying material; and a crosslinked printable polymer layer.

Claim 22 is directed to, *inter alia*, a heat transfer material comprising a substrate layer; a release coating layer; a peelable film layer; and a crosslinked printable polymer layer.

Claim 28 is directed to, *inter alia*, a method of forming an image-bearing coating on a surface, wherein the method comprises removing a non-transferable portion of a heat transfer material, wherein the heat transfer material comprises a substrate layer, a release coating layer, a peelable film layer, and an opaque crosslinked polymer layer and the non-transferable portion of the heat transfer material comprises the substrate layer and the release coating layer; placing the peelable film layer on the surface with the opaque crosslinked polymer layer exposed; and applying heat and pressure to the exposed opaque crosslinked polymer layer.

Claim 29 is directed to, *inter alia*, a method of making a printable heat transfer material comprising applying a release coating layer onto a substrate layer; applying a peelable film coating onto the release coating layer; and applying a crosslinked layer.

Claims 1-30 stand rejected under the statutory created doctrine of same invention double patenting over Claims 1-32 of U.S. Patent Application No. 10/003,698. This rejection is respectfully traversed.

As set forth in the office action, "same invention" double patenting means an invention drawn to **identical subject matter**, not the same category of invention. Claim 1 of U.S. Patent Application No. 10/003,698 is directed to heat transfer material

comprising a substrate layer; a release coating layer; a peelable film layer; and a discontinuous polymer layer having an opacifying material.. In fact, each of the independent claims in U.S. Patent Application No. 10/003,698 have a discontinuous layer. However, each of the independent claims in the present invention include a cross-linked polymer layer that may be completely different from the layers claimed in U.S. Patent Application No. 10/003,698. It is unclear how the Examiner can deduce that different layers comprise **identical subject matter** as required under 35 U.S.C. 101. These layers are not identical to the layers claimed in U.S. Patent Application No. 10/003,698 since discontinuous layers are not the same as cross-linked polymer layers. Accordingly, Applicants respectfully request withdrawal of this rejection.

Claim Objections

The Examiner has also indicated that should Claim 1 be found allowable, Claim 22 will be objected to as a substantial duplicate thereof. Applicants' respectfully traverse this objection. While both Claim 1 and Claim 22 include a substrate layer; a release coating layer; a peelable film layer; and a crosslinked layer, Claim 1 requires that the crosslinked layer be opaque. Applicants would request the Examiner to provide some support for the rationale that a layer with an opaque crosslinked layer is "a substantial duplicate" to a layer without an opacifying material, and how these claims "cover the same thing" or even where there is a "slight difference in wording" as Claim 22 does not include any wording whatsoever regarding an opaque crosslinked layer. Accordingly, Applicants respectfully request withdrawal of this objection.

II. Prior Art Rejections:

Claims 1-3, 5-18, 21-26 and 28-30 stand rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,232,267 to Oshima et al. (hereafter "Oshima"). This rejection is respectfully traversed.

Applicants' claimed invention may be relied upon as above.

Oshima is directed to a thermal transfer sheet having a substrate, a dye layer, a white layer to cover an image-receiving portion of a receiving material and an optional transferable receptor layer.

It is respectfully submitted that Oshima fails to teach or suggest Applicants' claimed invention. The construction and function of the present invention differs in several ways from the materials disclosed in Oshima. The "image receptive

portion” of the ribbon in the Oshima patent is not cross-linked, is designed specifically for dye infusion printing, and is located between a release coating and an adhesive layer. It is not on the surface, unlike Applicants’ claimed heat transfer material. Thus, the ribbon itself is not image receptive. Rather, the image receptive portion is transferred to a substrate (such as paper) from the ribbon to give the paper an image receptive surface. In the present application, however, the cross-linked image receptive layer is cross-linked and is located on the surface of the carrier. The adhesive coating (i.e. peelable layer) is under this and is against the release coating. Thus, the carrier can be printed and then the peelable film layer together with the printed image receptive layer can be stripped off the carrier by hand and applied to a material, such as cloth, with the peelable layer contacting the cloth.

Another difference is that the white portion of the ribbon in the Oshima patent does not have a separate adhesive layer. The white layer is designed to “adhere directly to the transfer receiving material without interposing an adhesive layer there between”. The binder in the white layer may act as an adhesive or it may contain an adhesive as well as a binder. The cross-linked white layer in the present invention is, however, bonded to the peelable film layer. The peelable layer is not crosslinked and is relatively thick to allow penetration into fabrics so adhesion is maintained even when the transfers are washed in water. The cross-linked white layer remains on the surface of the transfer so that the opacity is maintained.

There is also a difference in the peelable layers. The peelable layer of the present invention is also, in effect, the adhesive layer. The peelable layer of the Oshima patent is not an adhesive; in fact, it becomes the top surface after being transferred.

The white layer of the Oshima patent is very thin (0.5 to 2 microns) and contains a ratio of white pigment to binder greater than 1:1. The present application white layer is much thicker (10 to 50 microns) and has a pigment to binder ratio of about 1.5 to about 0.175. The thin layers of all the coatings in the Oshima patent are required because the layers would otherwise insulate the substrate surface from the thermal print head, which is the source of heat in this type of dye diffusion transfer process. The thicker layers of the present patent application provide opacity on the porous fabric surfaces and for handling in the hand peeling and application processes. The thicker films also enable high opacity without the need for high pigment concentrations, which would cause cracking and peeling when the transfers are washed.

The adhesive layers (when used) in the Oshima patent, as well as the print receptive and peelable layers, are also very thin for the reasons stated above, while thicker layers may be employed in the present application. Accordingly, since Oshima fails to teach or suggest a heat transfer material having a release coating layer, a peelable film layer and then a cross-linked polymer layer, it is respectfully submitted that Oshima fails to teach or suggest Applicants' claimed invention.

For at least the reasons given above, Applicants respectfully submit that Claim 1, Claim 13, Claim 22, Claim 28 and Claim 29 are allowable over the art of record. Furthermore, since Claims 2-3, 5-12, 14-18, 21, 23-26 and 30 recite additional claim features and depend from Claim 1, Claim 16, Claim 22 or Claim 29, these claims are also allowable over the art of record. Accordingly, Applicants respectfully request withdrawal of this rejection.

Claims 4, 10, 21 and 29 stand rejected under 35 U.S.C. §103(a) as being obvious in view of Oshima in view of U.S. patent No. 5,508,105 to Orensteen et al. (hereafter "Orensteen"). This rejection is respectfully traversed.

Applicants' claimed invention may be relied upon as above.

Applicants' discussion of Oshima may be relied upon as above.

Orensteen is directed to the use of aziridine in polymeric sheeting materials.

It is respectfully submitted that the combination of Oshima and Orensteen fails to teach or suggest Applicants' claimed invention. As stated above, Oshima does not teach or suggest a heat transfer material having a release coating layer, a peelable film layer and then a cross-linked polymer layer. Orensteen fails to remedy these deficiencies as Orensteen simply teaches the use of aziridine. As such, it is respectfully submitted that the combination of Oshima and Orensteen fails to teach or suggest Applicants' claimed invention.

For at least the reasons given above, Applicants respectfully submit that Claim 1 is allowable over the art of record. Furthermore, since Claims 4, 10, 21 and 29 recite additional claim features and depend from Claim 1, these claims are also allowable over the art of record. Accordingly, Applicants respectfully request withdrawal of this rejection.

Claims 19-20 and 27

It is noted that Claims 19-20 and 27 were not rejected under the prior art of record. As such, since these claims do not contain identical subject matter as previously discussed, it is respectfully submitted that Claims 19-20 and 27 are now allowable and Applicants respectfully request notification to that effect.

III. Conclusion:

For at least the reasons given above, Applicants submit that Claims 1-30 define patentable subject matter. Accordingly, Applicants respectfully request allowance of these claims.

The foregoing is submitted as a full and complete Response to the Office Action mailed April 1, 2003, and early and favorable consideration of the claims is requested.

Should the Examiner believe that anything further is necessary in order to place the application in better condition for allowance, the Examiner is respectfully requested to contact Applicants' representative at the telephone number listed below.

No additional fees are believed due; however, the Commissioner is hereby authorized to charge any deficiency, or credit any overpayment, to Deposit Account No. 11-0855.

Respectfully submitted,



By: Theodore M. Green
Reg. No. 41,801

KILPATRICK STOCKTON, LLP
1100 Peachtree St.
Suite 2800
Atlanta, GA 30309-4530
Phone: (404) 815-6500
Fax: (404) 815-6555
Atty Docket: 11301-0222 (44040-264309)